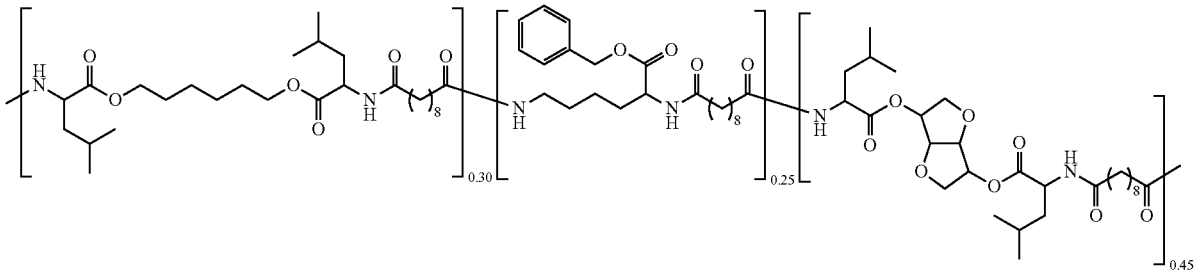
Formula III

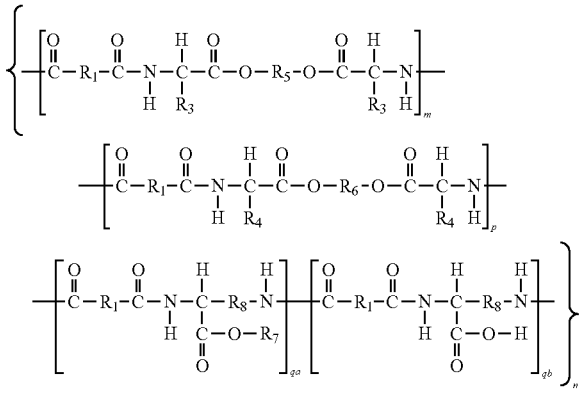


Comparative Experiment B: Latanoprost Release from PLGA Disks

Drug loaded disks of PLGA with a loading percentage of 10% latanoprost were prepared by solvent casting films and punching out samples from the films. Three individual disks with a diameter of 7 mm were placed in 5.0 ml PBS buffer solution at 37° C. At varying time points the complete PBS solution was refreshed to assure sink conditions and the drug concentration was subsequently measured. FIG. **6** and FIG. **7** present cumulative release curves and daily doses of latanoprost from PLGA and show poor control over daily doses with high latanoprost burst when the polymer matrix is degraded.

The invention claimed is:

1. A fiber for the delivery of a bioactive agent to an eye of a mammal, the fiber comprising a cylindrical core and a shell partially surrounding the core, the core comprising a bioactive agent and a polyesteramide copolymer according to the following chemical formula:



wherein

m+p is from 0.9 to 0.1 and q is from 0.1 to 0.9;

m+p+q=1 whereby one of m or p could be 0;

n is about 5 to about 300;

a is at least 0.05, b is at least 0.05, a+b=1, qa=q*a, and qb=q*b; wherein units of

m if present, units of p if present, units of qa, and units of

qb are all randomly distributed throughout the copolymer;

R_1 is (C_2-C_{20}) alkylene;

R_3 and R_4 are independently selected from hydrogen, (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_2-C_6)alkynyl, (C_6-C_{10})aryl, —CH_2SH, —$(CH_2)_2S(CH_3)$, —CH_2OH, —$CH(OH)CH_3$, —$(CH_2)_4NH_3$+, —$(CH_2)_3NHC(NH_2+)NH_2$, —CH_2COOH, —CH_2—CO—NH_2, —CH_2CH_2—CO—NH_2, —CH_2CH_2COOH, CH_3—CH_2—$CH(CH_3)$—, $(CH_3)_2CH$—CH_2—, H_2N—$(CH_2)_4$—, Ph-CH_2—, CH≡C—CH_2—, $(CH_3)_2CH$—, or Ph-NH—;

R_5 is (C_2-C_{20})alkylene;

R_6 is structural formula (III);

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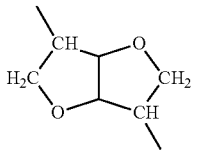

R_7 is (C_6-C_{10})aryl(C_1-C_6)alkyl;

R_8 is —$(CH_2)_4$—; and

the shell comprising a hydrolytically degradable polymer, the hydrolytically degradable polymer comprising poly(lactic acid), poly(glycolic acid), poly(lactide-co-glycolide), polycaprolactone, or a combination thereof.

2. The fiber according to claim **1**, wherein R_3 and R_4 are independently hydrogen, (C_1-C_6)alkyl, CH_3—CH_2—$CH(CH_3)$—, $(CH_3)_2CH$—CH_2—, Ph-CH_2—, or $(CH_3)_2CH$—.

3. The fiber according to claim **1**, wherein the polyesteramide copolymer comprises at least pendant 15% acid groups based on the total amount of pendant functionalities of the polyesteramide copolymer.

4. The fiber according to claim **1**, wherein the bioactive agent is an acid sensitive bioactive agent.

5. The fiber according to claim **1**, wherein the bioactive agent comprises latanoprost, bimatoprost or travoprost.

6. The fiber according to claim **1**, wherein n is from 50 to 200, a is at least 0.15.

7. The fiber according to claim **1**, wherein n is from 50 to 200, a is at least 0.5.

8. The fiber according to claim **1**, wherein n is from 50 to 200, a is at least 0.75.

9. The fiber according to claim **1**, wherein n is from 50 to 200, a is at least 0.8.

10. The fiber according to claim **2**, wherein n is from 50 to 200, a is at least 0.15.

11. The fiber according to claim **2**, wherein n is from 50 to 200, a is at least 0.5.

12. The fiber according to claim **1**, wherein R_3 and R_4 are $(CH_3)_2CH$—CH_2—; and R_7 is benzyl.

13. The fiber according to claim **1**, wherein R_1 is —$(CH_2)_8$—; R_3 and R_4 are $(CH_3)_2CH$—CH_2—; and R_7 is benzyl.